Final notes August 28, 1997

IMPLEMENTATION TEAM MEETING NOTES

August 7, 1997, 9:00 a.m.-4 p.m.
NATIONAL MARINE FISHERIES SERVICE OFFICES
PORTLAND, OREGON

I. Greeting and Introductions.

The August meeting of the Implementation Team, held at the National Marine FisheriesService's offices in Portland, Oregon, was chaired by Brian Brown of NMFS. The agenda for the August 7 meeting and a list of attendees are attached as Enclosures A and B. The following is a distillation (not a verbatim transcript) of items discussed at the meeting, together with actions taken on those items. Please note that some enclosures referenced in the body of the text may be too lengthy to attach; all enclosures referenced are available upon request from NMFS's Kathy Ceballos at 503/230-5420 or via E-mail at kathy.ceballos@noaa.gov.

II. Updates.

A) In-Season Management.

Michelle DeHart of the Fish Passage Center distributed Enclosure C, a memorandum updating the IT on the status of the 1997 migration. Among its main points:

? GBT sampling ended by July 1 at the four Lower Snake River dams. The incidence of GBT was very low at that time in the Snake, as spill levels were declining rapidly.
? GBT sampling continues at Rock Island, McNary, John Day and Bonneville Dams, as well as in the Clearwater River below Dworshak Dam. The incidence of signs was very low at the Lower Columbia sites in early July as spill continued at reduced levels. Incidence of GBT has since declined even further, with only one fish showing signs of GBT recorded in the Lower Columbia since July 3.
? GBT sampling at Rock Island continued to find the highest incidence of signs of any site in the system, with 5.6% of the fish sampled showing signs in fins on July 2. The incidence of fish with signs at Rock Island has since declined, as spill and TDG levels have fallen in the Mid-Columbia.
? Clearwater River GBT sampling found no fish with signs until the last week of July, when seven fish out of 500 sampled showed signs of GBT, probably attributable to the inception of the Dworshak spill program.
? For both wild and hatchery fish, subyearling chinook passage patterns at Lower Granite Dam have been very similar during July -- fairly consistent throughout the month of July, punctuated by bursts of higher passage on July 2-3, 9-11 and 17-22.
? The passage of subyearling chinook at Rock Island also remained fairly consistent throughout July, except for one sharp peak in passage on July 2-3, probably due to the release of 863,000 subyearling summer chinook on June 30.
? Subyearling chinook passage at McNary Dam peaked on July 5, when 462,000 fish passed the project. Indices remained high -- in the 200,000-fish-per-day range -- from July 2-10; they then fell to about 50,000 fish per day from July 16-28. Indices increased

again during the last few days of July, to nearly 150,000 fish per day -- probably due to the reduced spill proportion at that project.

(Please refer to Enclosure C for more details of DeHart's presentation).

One interesting point that isn't in the handout, DeHart added -- just in the last few days, we're starting to see fairly significant numbers of the Snake River sockeye released into Redfish and Alturas Lakes in June at Lower Granite.

Technical Management Team chair Cindy Henriksen discussed TMT activities, noting that the summer management period has now commenced and briefed the IT on current reservoir elevations and operations at various projects in the system. Snake River flow at Lower Granite Dam was about 54 Kcfs yesterday, she said; Lower Columbia flows at McNary Dam are now about 216 Kcfs, and in general, the headwater projects are being drafted to maintain a weekly average flow of 200 Kcfs at McNary.

We have reached an agreement with B.C. Hydro to do another Libby/Arrow swap in 1997, she continued; it should get underway some time next week. Libby is currently 4.8 feet from full pool, which is probably as full as it will get in 1997. Next week, Libby outflow will be increased from its current 10 Kcfs to 14.5 Kcfs, while Arrow outflow will increase by 10 Kcfs. As was the case last year, the Libby/Arrow swap is intended to keep Libby fuller through the end of August, Henriksen said; the total volume involved is 200 Ksfd.

Why didn't Libby fill this year? asked Brown. We were working from an early June volume forecast of 8.4 MAF for the April-August period, Henriksen replied. The Corps and the National Weather Service agreed that that was a valid, viable forecast. However, during the first few weeks of June, it was very cool, with temperatures of 10 to 20 degrees below normal in Montana. As a result, the snowpack above the 7,000-foot level evaporated, rather than running off and becoming inflow to the project. The bottom line, she said, was that the inflows we expected simply didn't materialize -- it now looks like we'll be 500 KAF-600 KAF short of what we thought we would get during the summer period.

What do you see as far as an end-of-August elevation for Libby, with the swap? asked Jim Yost of the Idaho Governor's office. We think we'll finish up eight to nine feet below full on August 31, Hendersen replied -- about four feet farther down than we are now. In response to another question, Henriksen said that, while flow at Lower Granite was at 54 Kcfs yesterday, slightly below the seasonal objective of 55 Kcfs, over the June 21-August 31 period, average flow at Lower Granite will be closer to 75 Kcfs. We're augmenting flow to the best of our ability, given the limitations at Milner and Dworshak, she said; however, the reality is that natural flows are falling, as they always do this time of year.

Dworshak will essentially be empty by the end of August, to accommodate the Corps' grouting contract, said Yost; we'll also be delivering the full 427 KAF of Upper Snake water during that period -- I don't know what else could happen to change that reality. The Salmon Managers have put forward some ideas, such as accelerating the delivery of the water from the Payette system, said Ron Boyce of ODFW. And we responded to that, said Ron McKown of USBR. I still haven't received a written explanation of that decision from the Bureau or from Idaho, said Boyce. We would like a formal, written response, explaining the rationale for not implementing

the Salmon Managers' SOR -- we asked about the possibility of exceeding the Milner flow cap, getting an additional volume out of Brownlee, and possibly spilling at Oxbow to exceed the 20 Kcfs powerhouse limitation there. I still feel that those operations, in combination, would help us better meet the flow targets throughout August.

I believe Jim Fodrea put together a written explanation of the rationale for that decision, said Yost -- I suggest you contact Jim for a copy of that memo, and if that isn't sufficient, perhaps we can provide something more specific. In general, on the Payette, there is an agreement that we're going to hold half of that water there; Idaho Power has already provided the replacement water for salmon, so there isn't any more water to come out of the Payette. At Milner, the agreement is 1.5 Kcfs -- that's all that's going to go through there, according to Idaho. If you want to exceed 20 Kcfs at Oxbow, that's something that will need to be worked out between Idaho Power and BPA. The bottom line is, all the water you're going to get out of Idaho is 237 KAF and 427 KAF, Yost said. We can talk about delivering that water as close to when you want it as possible, but that's all the water you're going to get from Idaho, unless you want to pay for it.

It sounds like it's less an issue about the water itself and more an issue about the lack of a written explanation, said Brown -- perhaps the State of Idaho and USBR could get together and provide a written response to the Salmon Managers' SOR, including the rationale behind the decision not to implement it. If the reason you've chosen not to implement it is that it is outside the BiOp, then simply say so. Beyond that, it sounds like this is an issue that has been decided for 1997.

B) Plan for Analyzing and Testing Hypotheses (PATH).

No PATH update was presented at today's meeting.

C) Integrated Scientific Advisory Board (ISAB).

Mike Schiewe of NMFS updated the IT on current ISAB activities; probably the main one of interest to this group, he said, is the work the ISAB is doing in response to a series of questions we posed to them last January, in the wake of the publication of Return to the River. Essentially, we asked them to describe what they would propose to be the next steps in the actual implementation of Return to the River, Schiewe explained. Among other things, they're looking at the historic population structure in the Columbia River, to determine where core populations existed and might still exist with the idea that those populations might be a focus of restoration; they're looking at habitats relative to those core populations, and the potential to implement some of the habitat-related changes recommended in Return to the River. We have also asked them to flesh out the biophysical aspects of the John Day Drawdown, in particular, the possibility that drawing John Day down to spillway crest would allow the region to reclaim a significant amount of habitat suitable for fall chinook spawning in the McNary tailrace. At this point, however, we haven't given ISAB the green light to do more than develop a strategy for how they would address each of those questions, Schiewe said.

So they're just laying out the approach, rather than actually beginning to try to answer these questions? asked COE's Witt Anderson. That's correct, Schiewe replied. And who will make the decision about whether or not the ISAB actually proceeds with this work? asked Anderson. NMFS and the Council, Schiewe replied. They provided us a draft memo articulating some of their ideas last month, and we're looking at that now, he added. In response to a request, Brown

said that he would make Will Stelle's original letter, laying out the questions ISAB was to consider, an attachment to the minutes from today's meeting.

Another major activity, which is about to land on the ISAB's plate, is a review of the NMFS Recovery Plan, due to be distributed to the Salmon Managers and the ISAB within a week or two, Schiewe said. One last item they're beginning to discuss is how the ISAB would participate in a review of the Columbia Basin hatchery program, in response to what is likely to be a request from the Power Planning Council.

D) Dissolved Gas Team (DGT).

No DGT update was presented at today's meeting.

E) System Configuration Team (SCT).

At the last SCT meeting, there was general agreement on the need for a joint meeting between the SCT, the DGT and others, to discuss the Corps' DGAS program in the context of the SCT's FY'98 project prioritization process, said Anderson. That meeting is scheduled to take place August 21. SCT chair Bill Hevlin distributed Enclosure C, a summary of the FY'98 Columbia River Fish Mitigation priorities developed at the July 21 SCT meeting. The group has been attempting to pare the Corps' capital budget down from the $127 million that was originally requested to approximately $100 million, because we think that's approximately what we'll get from Congress in FY'98, Hevlin explained.

There were 40+ projects to prioritize for FY'98, he continued. Two meetings ago, we placed those 40+ projects into three lists -- high, medium and low priorities. At the most recent SCT meeting, our intent was to develop a more surgical approach that would allow us to cut costs without sacrificing entire line-items -- looking within each line-item to see which elements might be deferred or dropped for FY'98, Hevlin explained. The intent was to keep as much of the complete program as possible, by deferring certain activities within some projects.

If you look at the handout (Enclosure C), you'll see, first, the list of highest-priority items, Hevlin said. The subtotal for this category is about $88 million. These activities were not prioritized; they were all considered high priorities by the people who were at SCT. That group did not include the Tribes, so this represents a consensus without tribal participation, he explained.

Within those highest priorities, we identified some project elements that could be partially cut or deferred, Hevlin continued. For example, on Page 2 of the handout, you'll see a prioritized list of medium-priority or "grey-area" projects. Bonneville PH1 surface bypass was ranked by SCT as the highest-priority grey area item; in other words, it would be the next project funded if Congress appropriates more than $88 million. The list includes a running total of program costs -- about $96 million if we add PH1 surface collection to the roster of funded projects, about $99 million if we add extended screens on two additional units at John Day, just under $100 million if we restore the $1 million we removed from the Corps' DGAS program and so on. To give you a sense of how this will work, he said, if the Congressional appropriation is $100 million, the additional funding for DGAS would squeeze in under the wire, while The Dalles surface bypass, the next item on the list, would not be funded.

To give you a feel for how the surgical cuts were applied to the list of highest-priority items, said

Hevlin, under Lower Granite surface bypass, the cost of the 1998 prototype test alone is $16.3 million. We're recommending that the planning for ongoing testing in FY'99, as well as the development of the dewatering system for that project, be deferred. That saves about $500,000, but it still allows the surface bypass prototype test to proceed in 1998. We then moved that $500,000 lower in the priority list, and if Congress gives us $108 million, it will be funded.

Hevlin spent a few minutes going through some of the other cuts identified by SCT (please see Enclosure C for details), noting that the SCT has scheduled a joint meeting with the Corps and the Dissolved Gas Team to discuss the proposed $1 million reduction in FY'98 DGAS funding in the context of overall DGAS program direction. Does that mean the $5.4 million you show for DGAS on the highest-priority list is also up for discussion? asked Brown. There may be some potential for that figure to change once we have this discussion about the overall direction for the DGAS program, Anderson replied.

What's the next step from here? asked Brown. Our August meeting is scheduled for the 18th, Hevlin replied -- at that point, everyone will have had an opportunity to digest this list, and we'll be discussing it further at that time. We've made a lot of progress in getting this list put together, but it's a continuing process. In response to a question, Anderson said that the House has recommended an FY'98 CRFM funding level of $85 million, while the Senate has recommended $117 million. Our best guess is that the actual appropriation will be somewhere on the high side of the $100 million-$110 million range, Anderson said. My information is that further discussions will take place in September, and we'll be updating people as soon as we know more.

Moving on, Hevlin said that, at the request of IT and CBFWA, the SCT has begun working on criteria for the Lower Granite surface collector. This subject was discussed at our last meeting, he said, and we appointed a subcommittee to follow up on the development of those criteria. The development of criteria for the extended-length screens at John Day is still to come, he added.

III. Decision Process -- Schedule, Goals, Information Needs.

This was one of the major topics of discussion at the July 23 meeting of the executives in Spokane, said Brown. At that meeting, we laid out the steps of a decision process, beginning with a consultation process, to establish the goal, scope, criteria and schedules for making the 1999 decision. We concluded that it would be beneficial to make a decision by this fall on what factors will guide the decision on long-term system configuration, Brown explained.

What I want to talk about today is, where do we go next? he continued -- specifically, what we should be doing next; who is "we;" who will be doing this work; and when. We need to make some progress on the questions raised in the draft discussion paper on this issue, distributed at the last IT meeting, and to be prepared to go to the Executive Committee meeting in October with a draft of the decision process the executives can approve.

At the July 23 meeting, a concern was raised that there is no effort comparable to PATH developing resident fish analyses, similar to those being developed for spring/summer and fall chinook and steelhead, in support of the long-term system configuration decision, said Brown. A second major area of discussion had to do with the timing of the decision, and a desire expressed

by some of the environmental groups present to make an early decision about expanded transportation as a viable long-term option -- what modifications, essentially, would allow the transportation program to function differently than it has in the past?

The other major message I took home from that meeting is the fact that there is a high degree of interest in having the dialogue continue on how this decision will be made, what kind of information will be developed to inform the decision, and what criteria that information will be run through, said Brown. We didn't really get into that; the main objective of the July 23 meeting was to get the participants to a common level of understanding about what we're doing, and to discuss the effects of making a decision sooner than 1999 on the information available to support that decision. I would like to leave today's discussion with some level of agreement about what, exactly, we will try to develop for an October EC meeting, he said.

At the July 23 meeting, Will Stelle referenced the possible American Rivers settlement, said one participant -- is it your intent to keep a wall between the American Rivers process and this one? No, I don't want to keep a wall between the two, replied Brown. However, at the same time, I don't want to put all of the emphasis on the issues being developed in the American Rivers forum.

Two questions, said Anderson -- first, was there any discussion at the July meeting about the scope of the 1999 decision? And second, was the issue of tribal participation in the decisionmaking process discussed? That was discussed primarily in the context of the settlement proposal, Brown replied. Whether or not the Tribes decide to participate in the October Executive Committee meeting will probably be a function of whatever discussion takes place between now and then. There was a meeting on the Friday before the July 23 meeting, said BPA's Alan Ruger; at that meeting, it was agreed that the Tribes will be developing a paper on how the federal trust responsibilities and treaty obligations fit into ESA. That's their next step, as far as I know, he said. My concern is simply that, if we develop something, but we don't have all the right players at the table during the development process, it will be dead on arrival, said Anderson.

The Tribes understand that it is NMFS's intent to move forward with the development of this decision process, said Brown -- my hope is that, no matter what they decide in terms of their level of active participation, their paper will be helpful in informing that development process.

In response to your first question -- if there had been any feedback on the question of whether the scope of the decision should include only Snake River salmon, all salmon stocks or all fish and wildlife in the basin -- there were no decisions made at the July 23 meeting, Brown continued. In the course of our own process, I would like to see whether those of us who are participating in this process have the same view of what that scope should be.

From Idaho's point of view, the scope should be all fish, including resident fish, said Yost. That includes resident fish in Montana, which haven't always been given full consideration. I won't deny that Montana -- or the tribes, for that matter -- have not been happy with some of the decisions that have been made in this process, said Brown. However, I don't think it's fair to say that NMFS has failed to give consideration to resident fish in Montana. The question isn't really whether we gave due consideration to the needs of those fish -- the question is, did we come to the right decision, given the conflicting needs in the system? Obviously, Montana feels that we

did not. And the point, in the context of this discussion, is that, in defining the criteria for this 1999 decision, that both upstream and downstream interests, and the needs of both resident and anadromous fish, receive equal treatment, said Yost. If we really are going to develop a decision process that addresses the needs of all fish, then we can't, just because we're trying to protect endangered species, wreak havoc on other species in the process. I think that, at times, we've come dangerously close to doing just that.

I think that's exactly the issue, and it's similar to the Tribes' issue with this process, said Ruger -- they feel that their voices aren't being heard as clearly as the voices of other participants in this forum. The way to answer that, I think, is by asking how we can get people to stay at the table, and have dialogue continue, when disagreements occur.

The group spent a few minutes revisiting the issue of participation -- or, more accurately, the lack of participation by some entities in the region -- in the development of the 1999 decision. I don't think we can continue this process with the idea that we'll only make the 1999 decision once we get governance in the Columbia Basin figured out, said Brown -- I've been involved in these issues for 15 years, and we haven't figured it out yet. I think we need to do the best job we can with the participants we have. There are several different forums where reshaping the table is being considered. But at this point, I'm not sure what more we could be doing to draw Montana and the Tribes into these discussions. Perhaps that's a question for Montana and the Tribes, observed Ruger.

Pat Ford of Save Our Wild Salmon said his organization has put together a letter articulating some of its ideas about the decision framework development process. Some of the general notions it contains include the fact that the process has to involve all of the sovereigns in the region; it has to satisfy all of the relevant laws and treaties, not just the Endangered Species Act; it has to include an ecosystem approach in relation to species and watersheds, and that it must have greater functional coherence than the crazy-quilt of processes that now exist. Having said that, we don't really have much helpful advice in terms of how the IT should deal with those concepts, Ford said; I think our group has made a decision to be an active, cooperative and helpful participant in the IT/PATH process, in the hope that that process can unhinge itself a bit from the current constraints imposed on the TMT and IT processes. Without some degree of unhinging from those constraints, decisions simply can't be dealt with.

After some minutes of further discussion, it was agreed that the IT participants would discuss the goal and scope questions within their agencies; their input will be discussed by IT, then forwarded to the IT/PATH group, who will then develop decision criteria and the development and analysis of information. Ron Boyce further suggested that the CBFWA resident fish group might be the appropriate entity to develop the resident fish information needed to complement PATH's anadromous fish analyses. I think that's an excellent idea, said Brown.

After a few minutes of further debate, Brown recapped this discussion by saying that, first, on the question of the goals and scope for the long-term system configuration decision, that all IT participants are invited to discuss this facet of the issue within their agencies; it will then be revisited at the next IT meeting. Second, it was agreed to ask IT/PATH to proceed with the development of decision criteria, recognizing that it may become necessary to expand that group to allow it to function as an ad hoc coordination entity for overseeing the integration of decision criteria in a number of different areas -- anadromous fish, resident fish, economics, treaty/trust

obligations, legal obligations etc. I'll try to capture this discussion in a memo, for distribution to the IT membership, Brown added.

IV. Facilitation in the Regional Forum Process.

As I said at the last IT meeting, there is agreement, among the federal agencies, at least, that adding facilitation to the Regional Forum process would be an improvement worth going ahead with, Brown said. I'd like to begin with facilitation for the Implementation Team, specifically, how we should proceed, rather than whether we should proceed. From NMFS's standpoint, we're ready to talk about anything that will improve governance, he said. Why begin with the IT? asked Boyce. Because it's the control point for much of the fish and wildlife activity in the basin, Brown replied. I think it's the logical starting-point.

The group discussed the possibility of hiring two facilitators -- one for the Executive Committee and Implementation Team, another for the technical committees, such as the Technical Management and System Configuration Teams. They then spent a few minutes debating whether or not facilitation is needed for the latter group, without reaching a definite conclusion. This led
to a discussion of cost -- if we decide to do facilitation across the board, we could be talking about a substantial amount of money, said Anderson -- we'd better be sure we get some value for that.

I don't want to get wrapped around the axel trying to figure out the issues, concerns and problems associated with facilitation at every level of the Regional Forum, said Brown -- if we do that, we'll find ourselves in another endless governance-type discussion, which will preclude the implementation of changes and improvements that I think, clearly, are needed. Personally, I am not comfortable leading this forum, said Brown -- I have an agency to represent.

The other Regional Forum entity that could clearly benefit from facilitation is the Executive Committee, he continued -- when we had the discussion about transportation at the April EC meeting, I don't think people left that meeting feeling very satisfied. NMFS has taken a real beating since that meeting, said Brown, and I don't want to go through that again. So there is an interest, on the part of the federal parties, at least, to add facilitation throughout the Regional Forum process, where needed. I think we need it at The Executive Committee, I think we need it at the Implementation Team, and I think we need it at the Technical Management Team, at minimum, said Brown. I also feel it is important to get the TMT facilitator on board now, so that whomever is chosen has a chance to get up to speed prior to the pre-season planning process for 1998, he added.

Ruger made the point that the facilitation needs of each group are so different that the type of facilitator needed for the IT, for example, might only get in the way of the SCT process. Several meeting participants expressed concern about the difficulty in finding an impartial facilitator with both the necessary technical background and mediation skills. Ruger said that his most positive experience with mediation had come during a negotiation not dissimilar to the current one in terms of scope, subject matter and extremes of position; the facilitator, a mediation specialist from Washington, D.C. with no technical background in the issues at hand, proved to be extremely effective in helping to resolve long-standing impasses. And in the Mid-Columbia HCP process, we have another very effective facilitator/mediator, thanks to whom we're on the

verge of a major, 50-year agreement, between the Tribes, the states and the federal agencies, said Hevlin. This person has forced us to work toward common ground; the bottom line is, there are people out there who can help us.

Perhaps the way to move forward from here is to issue a Request For Proposals, laying out the needs for each of the different groups in the forum, suggested Anderson. We could see what kind of proposals we receive in response, then create an ad hoc committee to go through them. I think that's a good idea, said Ruger, but unfortunately, I think an RFP would take too long.

After some minutes of further discussion, the IT assigned the SCT and the TMT to develop separate scopes of work for facilitators or "neutral chairs" for their processes, for discussion at the next IT meeting. It was further agreed that, in the meantime, an IT subgroup, led by Jim Yost and including Ruger, John Palensky of NMFS, Dennis Rohr of Chelan PUD and Ron McKown of USBR, will develop a joint IT/EC scope of work for facilitation, prior to the next IT meeting. Brown said he would send a memo to the TMT and SCT chairs, explaining this work assignment in more detail.

V. Contingency Plans for Potential 1998 Drought.

Jack Ball of the National Weather Service spoke to the group about El Niño, and its potential effects on the 1998 water supply. We do have an El Niño occurring now, Ball began. El Niño occurs when the Pacific equatorial tradewinds decrease or reverse. In a normal year, a thin layer of warm water on the surface of the ocean is blown westward, and piles up in the Western Pacific. In an El Niño year, the normal upwelling of nutrient-rich colder water is impaired, primarily along the west coast of South America; perhaps more importantly, from our standpoint, the normal jet stream, which during the winter is aimed directly at the Pacific Northwest, is displaced.

The jet stream is important, because it marks the boundary between warmer tropical air and colder Arctic air, Ball explained. In an El Niño year, as I said, the normal trade winds either decrease or reverse, depending on the strength of the El Niño effect. No two El Niños are the same, but in general, what happens is that the thin layer of warm water is blown eastward, rather than westward, resulting in enhanced convection farther east in the tropical Pacific. This causes a split in the jet stream, such that the colder Arctic air is pushed farther north and the typical Polar jet stream, which normally is aimed at the Northwest during the winter, also shifts north, resulting in a warmer winter here.

Ball put up a series of overheads, detailing some of the meteorological effects of El Niño. Basically, what I mean by a warmer winter is that the freezing level is higher, such that you don't get the normal lower-elevation snow pack, he explained. The flip side of El Niño is La Niña, which includes colder-than-normal ocean temperatures in the tropical Pacific. That's what we've been experiencing the last couple of years, he continued -- cooler winters, with lots of precipitation and low-level snow.

In predicting an El Niño, we look primarily for sea surface temperature anomalies, Ball said. Looking at current sea surface temperatures, we can see that this year's El Niño event started quite abruptly in February, and is going on strongly right now. For the week ending July 30, the latest data we have available, surface temperatures in our area of interest are very high -- 4.5

degrees C above normal. That's quite comparable to the strongest part of the 1982-'83 El Niño -- the strongest El Niño of this century, which is unprecedented -- typically, you don't start to see these kinds of temperatures until October or November, Ball explained.

Of course, what we're really interested in is what's going to happen, he continued. We use a number of different models to predict sea surface temperatures and other factors associated with El Niño. According to one of these models, which has tracked with actual temperature conditions pretty well so far this year, in the November-December-January period, this model shows the 1997 El Niño weakening. That's one forecast, Ball explained; another model shows a slightly different pattern, with the El Niño being strong through December, weakening in January, then disappearing in the latter part of the winter. In 1982-'83, the El Niño tapered off fairly quickly in the spring; according to these forecasts, the 1997 El Niño will disappear sooner than that.

In terms of the effects of the '82-'83 El Niño on water supplies in the Northwest, snowpack averaged 80%-120% of normal, said Ball. In general, the farther south you went, the bigger the snowpack was -- Crater Lake, for example, had a record snowpack that winter. In the north, it wasn't real dry, but it wasn't a heavy snowpack, either. The bottom line is that, for strong El Niño years, the correlations are warmer-than-normal temperatures, but normal-or-higher precipitation.

The official prediction for 1997 is below-normal precipitation during the early part of the winter for much of the Pacific Northwest, then, later in the winter, normal precipitation, said Ball. Overall, my prediction is normal to above-normal precipitation this winter, but without a lot of Arctic outbreaks. Snowpack in the mountains of the northern basin should be pretty close to normal, although the snowpack at the lower elevations will be thin. Bear in mind, however, that El Niños are notoriously fickle, and this one is much stronger, much sooner, than anything we've seen before. I should add that in 1990, a strong El Niño also occurred very early in the year; sea surface temperatures returned to normal in the winter and there was no El Niño that year, said Ball.

In response to a question, Ball said he would define "low-elevation snowpack" as the snowpack that accumulates below 4,000 feet elevation. In response to another question, he said he could not quantify the typical percentage of the year's snowpack that could be characterized as "low-elevation." The other thing to bear in mind, said Henriksen, is that, even when we do get a fairly heavy low-level snowpack, that's basically flood pool -- that's not spring and summer runoff and water supply. That's correct, said Ball -- even if it's there, it historically melts before spring.

In response to a question from Brown, Ball explained that drought conditions are typically associated with weak El Niños, not strong ones. During weak El Niños, sea surface temperatures are not as high; while the split in the jet stream still occurs, the jet stream is not as strong, and it simply doesn't dump as much precipitation as normal on the Northwest. Weak El Niños are also more persistent, and stay in place over more of the winter. During strong El Niños, the jet stream is all over the place. As I said, so far, this is the second-strongest El Niño we've seen in this century; the prediction so far is that it will peak early and decrease early. It could be that it's peaking right now; if it does blow itself out, and the trade winds return to normal, then the normal upwelling of cooler water may still occur this winter, Ball said. I should add that the model that is predicting that pattern has been quite accurate four out of the five times it's been

used, he said.

In terms of how continuing information about this year's phenomenon will be disseminated, said Ball, there are a couple of Internet homepages that will be tracking this; I believe that information will be updated every couple of weeks during the fall and winter. There is an El Niño link on the Portland Weather Service homepage.

In response to another question, Ball said that a Colorado State University professor has developed a more global climate theory -- essentially, that there is an "oceanic conveyor belt" phenomenon underlying El Niño. According to this theory, the "conveyor belt" brings warm water from the Pacific through the Indian and Atlantic Oceans; that warmer water then cools, sinks and returns on a loop into the Pacific. He has researched the historic climate records, and found a series of 20- to 30-year periods, some characterized by a lot of El Niño events, drought in West Africa and suppressed hurricane activity in the Atlantic, others by the opposite of those conditions. The last two years have been the two most active hurricane seasons we've ever seen in the Atlantic, while we here in the Northwest have experienced La Niña conditions, and it has rained in West Africa, Ball said. For that reason, this theory has been given a lot of press in the last two years. The thing about climate, said Ball, is that we could indeed be entering another 20- to 30-year wet cycle, and we simply have this isolated El Niño event in the middle of it.

NMFS has sent a letter to the three action agencies listed in the BiOp -- the Corps, BPA and USBR -- suggesting that we should be preparing for a drought, based on early indications that an El Niño was building, said Brown. I don't know about the rest of you, but from what I just heard, that isn't necessarily an effort we need to continue on with. Any disagreement?

I guess the real question is, how would planning for a drought affect fall operations? said DeHart. Would we go to a more conservative approach to system operations in the September-December period, assuming a worst-case runoff scenario? The letter suggested a couple of actions in the October-December period that should probably be investigated, Brown replied. As further information becomes available, how should that information affect things like flood control drafts toward an end-of-December target? That's certainly something NMFS would be interested in, from the standpoint of making sure the region is in the best position possible at the start of the juvenile migration season. One question I had was whether or not those flood control points change annually, based on runoff forecast, or if they are hard-wired annual targets, he said. Those targets do not change from year to year, Henriksen replied -- they are conservative fixed elevation targets, designed to encompass data from the periods of record for each individual basin.

Would there be any flexibility to change those flood control targets, based on current forecasts, such that the storage projects don't incur unnecessary drafts in the event of drought conditions? asked Brown. Probably only at projects like Grand Coulee, which do not have fixed end-of-December flood control targets, Henriksen replied. Bear in mind, though, that it is typically only in extraordinary water years -- either very high or very low -- that we are unable to refill some projects.

However, given all the uncertainty associated with weather forecasts this far in the future, I think it might be a good idea to at least explore some options in terms of flood control operations and sources of additional water, such that, if a drought does occur, we're not caught completely

unprepared, said Boyce. Perhaps we could begin that discussion at the TMT level, he suggested. What, specifically, are you proposing that we ask TMT to do? asked Brown. Basically, to look at the options -- flood control, additional water sources etc. -- to enhance refill potential and the system's ability to provide flows for salmon, in the event that drought conditions prevail in 1998, Boyce replied. After some minutes of discussion, however, no IT support was expressed for Boyce's proposal, and the TMT was not asked to discuss drought contingencies at this time.

VI. 1998 Transport.

This topic was not discussed at today's meeting.

VII. Update on Bonneville AWS Salvage and Repairs.

Gary Johnson of the Corps updated the IT on the status of repairs to the Bonneville Dam Powerhouse II auxiliary water supply system, where, in July, divers found that a total of 25 diffusion gratings had been displaced due to debris buildup. Most of the damage -- 20 screens -- was concentrated in the North Monolith area, on the Washington side of Powerhouse II, Johnson explained. The crux of the problem is the likelihood that migrating adult salmonids may have entered the AWS through those displaced gratings, and as soon as the problem was discovered, we began working with the Fish Passage O&M Coordination Team to develop strategies for dealing with the situation over both the short and long terms.

Johnson spent some minutes describing the extent of the damage and the subsequent repair and fish salvage operations that have followed its discovery. Basically, we replaced the diffusion gratings in the North Monolith area, but left the displaced gratings on the south side of the system open, with the diffusion valves also open so that fish in the AWS would have a way to leave the system and re-enter the river, he explained.

Last Thursday, on the advice of the O&M team, we began providing flows, detectable to fish, through the auxilliary water supply conduit, with the idea that this might lead them out of the AWS conduit and into the ice/trash sluiceway on the south side of the powerhouse, Johnson continued. We ran that operation for one day initially, to check our hydraulics and to make sure we weren't going to pop anything loose, causing more problems. Everything looks fine; in fact, when we unwatered the ice/trash chute later that afternoon, there was one adult steelhead that had moved out of the AWS system. When the operation recommenced the next day, we were successful in getting that steelhead back into the tailrace. At that point, we knew that if fish were present in the AWS system and were willing to move, they could move up and out of that system.

On Monday, we curtailed that operation, and restored the adult fish ladder to service, and opened the north downstream entrance, which was how the system was operating prior to the occurrence of the problem, Johnson said. One of the concerns was that, based on radio-tracking information, there may be a number of fish trapped in the AWS, including tagged fish; the University of Idaho placed underwater antennae at the north and south ends of the AWS, and have been monitoring
those antennae ever since. However, they have detected no radio-tagged fish at either of those sites. We have also set up hydroacoustic arrays at the north and south ends of the AWS, which started operating on Monday, said Johnson; in the north end, they saw no targets; in the south

end, they did see some targets which, when expanded for sample area, indicated that up to 250 fish were present in that area. However, none of those targets was more than 15 inches in length, and most of the targets were 6-8 inches in length.

At that point, the O&M team recommended that the north ladder be placed back into service, with a cross-channel bulkhead in place to keep the south side of the system closed at this time, Johnson said. That option was presented to FPAC on Tuesday; their reply was that they would like to have the full system back in operation by August 27; if that isn't possible, they want to see at least the north side fully operational by that point. At yesterday's TMT meeting, I proposed that the north shore system be placed back in service tomorrow, and to ask the O&M team to evaluate the results of that operation on Monday, with the goal of getting the full system back in operation by August 27, with a good level of comfort that we're not going to create additional problems in there. There is a dive team in the water at Bonneville today; the entire dive will be video-taped, and once we have a chance to look at that, we'll have a much better feel for the extent of the remaining debris problem in that system, Johnson said.

In the meantime, we're ready to begin the interim operation of the north shore entrances, using one fish water unit running at approximately 1.8 Kcfs-2 Kcfs, as opposed to the normal 2.5 Kcfs, he continued. That should provide about a foot of head on the entrance, with 10 feet of depth at the weirs -- good passage conditions, in other words.

On Monday, we'll send in another dive team, to re-video all of the diffusion gratings to see where we are in terms of debris, said Johnson. At that point, we'll begin to explore, with the O&M team, where we go from there. I would just like to add that the cooperation and expertise of the state and tribal fishery agencies has been much appreciated; it was not a good situation to find ourselves in, but it's been a good team effort to try to develop solutions to the problem.

In response to a question, Johnson said that, prior to this coming winter, the Corps plans to unwater the AWS system and remove all of the remaining debris accumulated during the high-flow period this spring; they are also putting together a contract for the removal of the silt and debris in the project forebay. Through the SCT, we will also be investigating engineering solutions to this unanticipated debris problem at Powerhouse II, he said.

What about the desire to resume at least some level of operation of Powerhouse II, from both a power generation standpoint and an adult passage standpoint? asked Brown. From an adult passage standpoint, if we were to operate up to three of the main units in Powerhouse II, I don't believe we would compromise adult passage at that facility, Johnson replied. On the juvenile side of the equation, operating those units does a couple of things: first, it creates a counterclockwise eddy in an area where fish can become trapped. Second, operating three units gives you about 40 Kcfs through the powerhouse -- that will produce pretty low velocities once you get away from the powerhouse, and we know from past experience that there are normally quite a few predators in that part of the tailrace. So from a juvenile passage standpoint, I think that operating those units at the north end will not produce good passage conditions, Johnson said -- it won't be enough to really move those fish out of the tailrace. It's a tough question, and as far as I know, the decision has not yet been made to resume operation of the powerhouse.

VIII. Status of ISRT Consideration of How to Address COE-Funded Activities Outside the Current Structure.

This item was not discussed at today's meeting.

IX. Steelhead Status Review Under ESA -- Schedule for NMFS Final Decision.

NMFS will make an announcement on the ESA status of steelhead this coming Monday.

X. Next Executive Committee Date, Location and Agenda Items.

Brown said the next Executive Committee meeting has tentatively been scheduled for the week of October 6; beyond that, this item was not discussed at this meeting.

XI. Approval of Minutes from July 10 IT Meeting.

This item was not discussed at today's meeting.

XII. Next IT Meeting Date, Location and Agenda Items.

It was agreed to schedule an IT conference call at 9 a.m. Thursday, August 28, to discuss the facilitation issue. The next full IT meeting was set for Thursday, September 25 from 9 a.m. to 4 p.m. at NMFS' Portland offices.

XIII. Public Comment.

No additional public comment was offered at today's meeting.